literature is in the numbers?

A Oh, no, no. No, we didn't have to do that for this -- in this situation because we were doing a -- it was a mass balance analysis. So we knew how much mass we were starting with and, therefore, how much we should be ending with. So there's no need to do that type of assessment.

Q Okay, so you all didn't do it?

A Correct.

Q Okay.

A Actually, you know what?

Q Yes, sir.

A We may have done something along those lines with cyclohexane.

Q It would be in your box though; right?

A Yes. I think we did that early on. I'd almost forgotten about it. I think we did that with cyclohexane.

Q So there's a known evaporation rate for cyclohexane?

A Well, we actually did it ourselves and measuring and published a study on that where we were doing some validation of models.

Q You all did it in a GBTEC?

A No. We did it in a different fashion by

behalf of U.S.Steel or Radiator about their knowledge of the dangers of benzene at any time in their corporate history?

A No.

Q All right. You said you got some raffinate, oil base raffinate from Sunoco?

A Yes.

Q Do you do litigation work for Sunoco?

A No.

Q Have you ever?

A Well, I may have at one time. They may have been listed among many others. Now, I just want to clarify, I think this product originally came from Sunoco. We actually got this from ChemRisk who had gotten the product from Sunoco.

Q You used to work at ChemRisk ever?

A No.

Q You've done some work with them?

A I don't know that I ever have.

Q Okay. You don't believe you've ever done any work for ChemRisk?

A No, I have not.

Q Do you ever do any sort of collaborative efforts with ChemRisk on any type of projects?

A I have not.

Q Doesn't have 25 percent --

A I haven't tested that. You're asking me a hypothetical and I'm giving you a hypothetical answer.

Q Sure.

A In fact maybe there would be an opportunity here for Mr. Petty and I to run this study ourselves and, you know, get an independent third party involved and run through this study again and 'cause it's rather new data. And I'd be willing to do that.

(RECESS TAKEN)

Q The surface area that the 20 milliliter when it hit the glass plate, fanned out; right?

A Yes.

Q Created, I think you said a pool?

A Yes.

Q Okay. Do we have a determination as to the size of the pool that it made --

A Yes.

Q -- when it was dropped. Where is that supporting data? Is it in there?

A It is in here. Do you want to see that?

Q What Bates number? Can you just give me

A Yes.

Q What's a confounder? What does that word mean?

A Something that either overlays or suppresses the data.

Q And am I right that you talk about something overlaid or suppressed the data that should have been read by ChemSense 600?

A Well, two things happened that we were aware of. One -- well, one we were aware of, that there are some -- there were two chemicals in particular that were being used here that -- that is ethyl benzene and xylenes that actually increased the signal from the sensor. And we accounted for that. We calibrated it and removed that from over-producing.

We then had another issue we didn't know about until afterwards which is where cyclohexane actually suppresses the signal for benzene because it's a very similar contaminant. And when it's -- apparently through this piece of equipment when benzene and cyclohexane are ionized together, there is a suppression of the signal.

Q And who told you that?

A The technician running the equipment.

Q Who's the technician running the

equipment?

A Adam Keil. And we actually -- we did a follow-up evaluation to demonstrate that particular effect.

MR. GRAY: Did he finish his earlier answer. When you said who told you that, I think you cut him off in the middle of an answer. I'm not sure.

MR. LONGORIA: I though he said Adam Keil.

MR. GRAY: Well, I know but he was in the middle of an answer and you said who told you that.

MR. LONGORIA: Oh.

MR. GRAY: And he stopped.

MR. LONGORIA: I'm sorry. I apologize.

MR. GRAY: Can we go back to the question before who was Adam Keil and make sure Mr. Spencer was done with his answer?

(Court Reporter reads former answers.)

Q Adam Keil, what's his title?

A He's a chemist.

Q Was he like certified to use the ChemSense 600 that he learned about the suppression of -- was it the --

A He's an analytical chemist but a Ph.D. certainly isn't, you know --

Q Right, right.

A -- required to run equipment. There's no certification for running a piece of equipment like that.

Q But was there some type of information, a bulletin or something that tells you that the ChemSense 600 somehow -- what did you say cyclohexane does to benzene?

A Suppresses the signal.

Q Yeah, and because of the suppression of the signal, the ChemSense 600's not going to read benzene?

A No. It reads it but it suppresses it meaning that we should have been seeing a higher percentage and we were seeing a lower percentage in our mass measured by the ChemSense 600. So as a result we saw that there was something missing. We compared that to the pure benzene.

We then ran a series of tests using mixtures, varying mixtures of cyclohexane and found that at the ratio -- proximate ratio of cyclohexane to benzene in Liquid Wrench we found that there was a proximate 50 percent -- 46 percent suppression of the benzene

signal due to cyclohexane.

Q Was the suppression that was occurring, was it because, is it suppressing the signal to the machine so the machine just doesn't pick it up?

A Correct. It's reading it as something else and not calling it benzene. So it doesn't get charted out as benzene. It doesn't see the --

Q So something in ChemSense 600 just wasn't -- its sensitivity or its ability to decipher out the two, it doesn't read it; right?

A Correct. It was seeing it as something else.

Q Okay. And has something -- is there something from ChemSense 600 that tells us that?

A There is now.

Q They sent what? You sent -- how?

A This is the first that I know of that this has -- this type of product and this type of mixture has been in these concentrations was done, so this was a unique phenomenon. We knew about it for the other chemicals based on a Mist study. We did not know about the benzene/cyclohexane issue.

Q Did you all send something to ChemSense that verified that their machine couldn't read them?

A No. We conducted an in-house

evaluation, as I mentioned, using a variety of mixtures of benzene and cyclohexane to demonstrate the suppression of the signal.

Q How much did that ChemSense 600 cost?

A We rented it. I don't, it's like $5,000 for a month.

Q $5,000 a month?

A I believe so.

Q How much is a brand new one of those things?

A I'm not certain. You can check with Homeland Security. They're the ones that use them to evaluate low levels of hydrocarbons in a variety of probably ports and airports and harbors.

Q Is this supposed to be the topnotch, chemical-sensitive machine that's out there in United States?

A It is. It's a lot of technology. It's a mass spectrometer but some -- the way that it ionizes the material and reads those ionization signals is somewhat unique and for looking at low concentrations of multiple chemicals at the same time --

Q It's the Ferrari of mass spectrometers?

A -- and doing it instantaneously. So it

is unique in that aspect and that's why it's been so widely used by Homeland Security.

Q Okay. The Ferrari of mass spectrometers; right? Would you could call it that?

A I wouldn't call it. Your term. It is an instrument that by its design has a good application.

Q Best of the best?

A It was a good tool for our application. It was the best tool for our application.

Q Okay. And even your best according to you, you found somehow that this ChemSense 600 regardless of it being the best of the best made a mistake?

A It didn't make a mistake. Again --

Q It just wasn't able -- it wasn't able to pick it up; right?

A -- this happens in any analytical tool. We determined what that was and we accounted for it. It doesn't affect the rate of evaporation. We still know when the material, when the benzene was gone and how fast it was gone.

Q You all believe you all discovered a mistake and hypothesized as to what was causing that mistake in the ChemSense 600; right?

MR. GRAY: Object to the form.

THE WITNESS: Again, your words, not mine. We determined that there was a suppression of the signal. We weren't seeing all the mass that we thought we would be seeing.

BY MR. LONGORIA:

Q Well, let me pick your words. "The evaporation of pure benzene gave very good mass balance value so it was hypothesized that one or more compounds in the mixture was suppressing the signal attributed to benzene in the mass spectrometer". Did I read that correctly?

A I'm sorry, I didn't -- I wasn't following what you were reading. What page are you on; 10?

Q Uh-huh.

A At the last paragraph? Oh, I see where you read, yes.

Q Okay. And so "The exact mechanism of this signal suppression was not determined but it should be noted that there is absolutely no evidence to suggest this signal suppression or loss of benzene is anything other than reduced sensitivity of the mass spectrometer for benzene in the presence of other

organic compounds". Did I read that correctly?

A Correctly.

Q Okay. All right, so I mean you're hypothesizing and that's your educated guess; right?

A No. We ran a follow-up study to that one evening where we actually --

Q Does it tell me that in this report?

A Yes. If you read the last sentence, all the details on here, what we did, they are in these documents here. And there's charts and tables for you to review. And it says we did a mixture of a ratio of 3 to 1.

Q So somebody needs to tell these ChemSense 600 folks that they got a problem; right?

A Well, you know, again any analytical instrumentation has interferences. And we determined this one and we determined what the extent and what the cause of that interference was. But it did not affect the outcome of our values.

Q Objection, nonresponsive. Page 15.

A Of what?

Q Your report, expert report.

A Okay.

Q In the middle you talk about Plaintiff's Industrial Hygiene Expert Report and then you go, the